NEW GENERA OF CHALCIDOID HYMENOPTERA.

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HOLANUSOMYIA new genus.

Female.—Belongs to the Ectromini. In my table of the earth's genera runs to *Holanusia* but the stigmal vein is elongate, somewhat over twice the length of the marginal, the postmarginal short, two thirds the length of the marginal, the latter nearly thrice longer than wide. Scape with its dilation broadening distad, the club a little over half the length of the funicle. Face inflexed, the frons not prominent, moderately broad. Eyes longer than the cheeks. Axillæ narrowly joined. Pronotum transverse-linear, the scutum large.

1. Holanusomyia pulchripennis new species. Genotype.

Female.-Length, 2.00 mm.

Dark metallic purple, the legs brownish yellow except the coxæ, the mesopleurum suffused with yellow, also the head; scape, pedicel and funicle one dusky pallid (funicle one white along one side), funicles two and three white, the rest black. Pedicel somewhat longer than wide, shorter than funicle one which is a half longer than wide, the distal three funicle joints wider than long, three subquadrate. Head and thorax finely scaly. Cephalic femora compressed. Fore wing with the following remarkable markings—An oblique, conspicuous black band across not far from the tip (with a crenulate distal margin); another clearer, rainbow-shaped stripe across from the marginal vein (running along the proximal edge of the stigmal vein), cephalad running along the submarginal vein (for about the length of the stigmal vein) to the base of the third, oblique (but oblique in an opposite direction caudo-proximad), shorter and thicker cross-stripe but which abruptly fades near the caudal margin. The two proximal stripes form an inverted V with one arm only half the length of the other and the apex broad not acute.

Described from one female on a slide in the U. S. N. M. labelled "From No. 23. Reared from *P. citri* on Bamboo, Manila, P. I., July, 'oo. Compere."

Type.—Catalogue No. 19384, U. S. N. M., the female on a slide.

MERISUS Walker.

Female.—Similar to *Apirene* of the Miscogasteridæ but the form is more slender and the solid antennal club terminates in a more distinct spine.

1. Merisus octoguttata new species. Female. Genotype.

Differs from *Merisus flaviventris* in having the antennæ all black, one mandible but three-dentate (other not seen), the femora are dusky and the abdomen bears the following black markings: A narrow, marginal stripe from base to base of distal sixth where its end turns mesad shortly; and five pairs of discal spots (five in a line longitudinally on each side of the meson), the first pair dots, the second pair semicircular, the third and fourth largest, oblique, subpyriform; the fifth farther laterad, connected with the marginal stripe just proximad of its end; the first is at the apex of segment two or well out from the base. Hind coxæ yellowish brown. Clypeus striate longitudinally, the face with scattered silvery pubescence. Propodeum with a fovea at cephalic margin toward the spiracle.

From one female taken by sweeping grass, Chevy Chase Lake, Maryland, April 24, 1915.

Type.—Catalogue No. 19396, U. S. N. M., the female on a tag, the head and a hind tibia on a slide.

Genus TAFTIA Ashmead.

The club is solid, the fore wings embrowned but hyaline caudad of the proximal half of the submarginal vein. Head rounded, the face inflexed. Mandibles acute. The dorsal body may be washed more or less with metallic purple. Brown. Middle tibial spur short. Costal cell of the fore wing broad. A female in the U. S. N. M. on a slide labelled "No. 18 From *Pscudococcus citri* on Bamboo, Manila, P. I., Calif. State Insectary." Compared with types. This specimen bore two black, long, clavate appendages on the face mesad below the middle. I could not find these organs on the types and presume they have been broken off.

MIRASTYMACHUS new genus of the Ectromini.

1. Mirastymachus europaeus new species. Genotype.

Female.—Length, 1.00 mm.

Differs from the genotype of *Astymachus* in having the ovipositor much shorter and nonexserted, the antennal club black, also funicles one to three (only funicle one in the named species), the fore wings do not have a round black spot over the marginal vein as in the named species, the club is distinctly three-jointed. The ovipositor is shorter, as in *Xanthoencyrtus*, the scape compressed but not dilated. Form as in *Xanthoencyrtus*. The postmarginal vein is present but short.

The male bears nine-jointed antennæ like the male of the named species but the joints of the funicle are all much longer, the solid club still longer,

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being over twice the length of funicle two which is shortest, somewhat longer than wide, longer than the pedicel; funicle six longest, twice longer than wide and along one side bearing a row of remarkable sensory organs like minute clavate, conidial spores (absent in the other species). Both species bear a long thoracic phragma. In *Astymachus japonicus*, the marginal vein is twice longer than wide, subequal to the stigmal; here that vein is sub-punctiform, no longer than the evident postmarginal, the stigmal much longer.

The females are golden yellow, the males dusky yellow (including the appendages but the legs a little paler, the wings hyaline); funicles four to six in the female white.

From two pairs on a slide in the U. S. N. M. labelled "Par. of *Dactylopius* mealybug-like form, possibly *Pseudococcus sp.* (Received labelled 'unknown eggs.' Reared May 19, 1906. Denmark, J. P. Kryger.) The wings of the females were shrivelled. The locality is Vangede Mose.

The genus Astymachus Howard differs from Xanthoencyrtus Ashmead only in having the mandibles acutely tridentate, the marginal vein twice longer than wide, the postmarginal vein absent and the ovipositor distinctly longer (yet inserted distad of the middle) and distinctly extruded. Also the face is more inflexed, the scape slenderer. Mirastymachus differs from Xanthoencyrtus in having the club three-jointed. Types of Astymachus japonicus Howard examined and type of Xanthoencyrtus nigroclavatus Ashmead.

Types.-Catalogue No. 19398, U. S. N. M., two pairs on a slide.

2. Mirastymachus americanus new species.

Female.—Length, 1.15 mm. Dusky, the wings hyaline, the legs dusky yellow; club and funicles one to three, black, funicle six, bulb and middle of scape and base of pedicel darker than funicles four and five. The oblique hairless line of the fore wing is broader than in the genotype and the funicle joints are larger, one somewhat longer than wide. Otherwise about the same.

Described from one female taken April 26, 1915, by sweeping in the forest, District of Columbia.

Type.-Catalogue No. 19399, U. S. N. M., the female on a slide.

EPICERCHYSIUS new genus.

Female.—In my table of the earth's encyrtine genera runs to *Chestomorpha* Ashmead, the abdomen being compressed but it is as long as the thorax, the ovipositor exerted for a third (or nearly) of its length. The head is a little longer than wide (cephalic aspect),

the frons moderately broad, the labrum conspicuous, the eyes very long, reaching nearly to the mouth, narrowing ventrad, long-reniform, the head lenticular but the short scrobes are distinct, not joined above. Mandibles with three distinct teeth, the second a little the longest. Antennæ long and slender, the scape reaching the ocelli, the funicle joints all nearly thrice longer than wide, the club blunt at apex, somewhat wider than the funicle but only about a third of its length. Hind tibial spurs double, one of them long and slender, the other of normal length. Marginal vein two and a half times longer than wide, slightly longer than the postmarginal or stigmal. Body with the general build of *Cerchysius*. Axillæ joined at meson. Scutum large, subquadrate.

1. Epicerchysius xanthipes new species.

Female.-Length, 1.75 mm.

Metallic green, the scutellum rosaceous coppery, the legs and antennæ yellow except the middle tibiæ which are fuscous above, the caudal femur above at tip and the caudal tibiæ which are metallic purple from end to end. Fore wing with a distinct cross-stripe of fuscous from the marginal and postmarginal veins, and which is of moderate width, divided by a narrow hyaline streak just caudad of the middle and bevelled off cephalo-distad to the apex of the postmarginal vein. Pedicel over twice longer than wide at apex, nearly as long as funicle one. Extreme tip of exserted portion of the ovipositor white. Thorax very finely scaly, the scutum and scutellum with numerous minute setigerous punctures, the clothing white and short. Dorsolateral aspect of propodeum with white pubescence, glabrous from thence to meson.

Described from one female on a tag in the U. S. N. M. labelled "from cotton boll. 708. E. S. Tucker, March 1909, Arlington, Tex."

Type.—Catalogue No. 19400, U. S. N. M., the above specimen plus a slide bearing the head, fore wing and a hind tibia.

ANAGYRELLA new genus.

Female.—In my table to the earth's encyrtine genera runs to *Leuro-cerus* Crawford but the postmarginal and stigmal veins are very elongate and subequal, the marginal punctiform. The scape is greatly, foliaceously dilated, the flagellum clavate, the solid club short and thick, obliquely truncate from near the apex, nearly as long as the funicle whose joints are much wider than long, lengthening and widening distad, not compressed. Hind tibial spurs double, one spur

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small. Frons moderately broad, not prominent, the face inflexed, the scrobes forming a deep semicircle. Axillæ distinctly separated for some little distance. Thorax rather flat, the scutum wider than long, a little shorter at meson than the triangular scutellum which extends to the base of the abdomen. Pronotum transverse. Abdomen no longer than the thorax, the ovipositor neither exserted nor prominent. One ring-joint. Legs normal. Cheeks distinct. Mandibles with the first and third teeth equal, the middle distinctly longer, over twice as long, acute.

Somewhat like *Euryrhopalus* Howard (which has very large eyes but the cheeks are quite long) but the frons is much broader, the postmarginal and stigmal veins distinctly longer, the scape dilated and so on.

1. Anagyrella corvina new species.

Female.--Length, 1.15 mm.

Dark purplish black, the fore wings smoky to apex from a little distad of the middle of the submarginal vein, the rather broad costal cell infuscated to base and also the caudal margin. Tarsi yellow except the distal joint. Pedicel somewhat longer than wide at apex; funicles one to two subequal, four no longer than wide. Oblique hairless line of the fore wing with a half dozen complete lines of cilia proximad of it. Head and thorax shining but very delicately scaly, the pubescence not conspicuous.

Described from two females on tags labelled "State Insectary, Calif. 675. Ex. *Pscudococcus*. B." Fresno, California.

Types.—Catalogue No. 19401, U. S. N. M., the above specimens on tags, the head, hind tibia and fore wings on a slide. One female a paratype.

METALLONOIDEA new subgenus of the Encyrtini.

Female.—In my table to the earth's genera runs to *Holcothorax* Mayr (*partim*) and *Metallonella* Girault and close to *Rhopus*. Differs from the latter in having the club three-jointed, not solid, the color metallic, the frons somewhat narrower, the marginal cilia normal, the venation different (in *Rhopus*, the venation does not attain the costa, the submarginal vein not forking at all, very narrow—*R*. *testaceus*), the mandibles in *Rhopus* truncate as in *Eucomys*. From *Holcothorax testaceipes* Ratzeburg at least in color and in venation according to Mayr (*testaceipes* may be *Rhopus*). From *Metallo*- nella in venation, the marginal vein being twice longer than wide, not punctiform, the postmarginal and stigmal veins subequal, each a little shorter than the marginal. Differs from *Psylledontus* Crawford in having the club three-jointed, the body flatter and weaker, the marginal vein not punctiform, the postmarginal vein distinct (in *P. insidiosus* the mandibles are weakly tridentate, the first two teeth obtuse, the third truncate). Resembles closely *Encyrtomyia* Girault of the Eucomini. Ovipositor very slightly extruded. Axillæ joined narrowly. The marginal cilia of the fore wing in *Rhopus testaceus* are not long but only a little longer than normal.

The present tribal arrangements will break down I am sure but under them this is a new genus; the dentation of the mandibles should be considered not more than of subgeneric value and this form will rank under *Encyrtomyia* as a consequence.

1. Metallonoidea brittanica new species.

Female.-Length, 0.55 mm.

Very dark metallic green, the wings hyaline, the venation pale dusky yellow. Tarsi, tips of tibiæ, middle knees broadly, cephalic knees and base of middle femur, white. Body very finely scaly. Pedicel a half longer than wide, much longer than any of the funicle joints of which one and five are largest, five wider than one, wider than long, one slightly longer than wide, two and three subequal, shortest, four larger than three, smaller than five. Hairless line rather narrow, with four or five lines of cilia proximad of it. Marginal vein with slight infuscation under it. Scutellum extending to the base of the abdomen.

Described from one female on a tag, reared from *Lepidosaphes* ulmi, Manchester, England, Letter October 30, 1914. A. D. Imms, Manchester University. "Sp. A."

Type.—Catalogue No. 19402, U. S. N. M., the female on a tag, the head and a fore wing on a slide.

PARAHOMALOPODA new genus (Encyrtini).

Female.—In my table to the earth's genera runs to *Homalopoda* Howard but differs in lacking the clump of hairs from the apex of the scutellum and the pair of clumps from the occiput. Also the postmarginal vein is as long as the stigmal which is two thirds (or a little less) the length of the marginal. Also the mandibles bear four small, subacute teeth and the ovipositor is extruded distinctly but shortly (more so than in the genotype of the named genus). Differs

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from *Plagiomerus* Crawford in lacking the scutellar hair clusters. The frons is not prominent.

1. Parahomalopoda peruviensis new species. Genotype.

Female.—Length, 1.15 mm. excluding the ovipositor which is a little over a fourth of the length of the abdomen. Dark metallic green, the wings hyaline but infuscated slightly under the marginal and stigmal veins, the venation dusky yellowish. Antennæ yellow suffused with dusky, the pedicel dusky except at tip. Tarsi white except the last joint, also the base and distal third of caudal tibiæ, middle knees broadly, middle tibiæ excepting a broad cinctus a short distance out from base. Axillae slightly separated. Funicles three and four subequal, large, a little longer than wide, one and two subequal, each a half shorter than three or four. Club wider and a little longer than the funicle. Marginal vein thrice longer than wide. Pedicel nearly twice longer than wide. Body scaly.

From one female in the U. S. N. M., on a slide labelled "1144° 3a. Gu. 1. Sp. 2. Corcomba, May 17, 1910—Townsend." Peru.

Type.—Catalogue No. 19403, U. S. N. M., the above specimen.

In *Pseudhomalopoda prima* the scape is dilated convexly distad. The above species differs from *Plagiomerus diaspidis* Crawford only in having a fuscous patch under the marginal vein and the scaly sculpture of the thorax is finer. In *Plagiomerus* there is a smaller, second hair cluster, one on each side of the mesal one.

PSEUDHOMALOPODA new genus.

Female.—Differs from *Homalopoda* in having the antennæ short and thick, the scape with a small convex dilation ventrad at apex, the funicle joints all much wider than long, the pedicel and funicle subcompressed.

1. Pseudhomalopoda prima new species. Genotype. Female.

Length, 1.00 mm.

Differs from the genotype of *Homalopoda* in having the middle tibia except at base golden yellow, the ovipositor is not shortly extruded as in that species and the wings bear the following different pattern: The large naked hyaline area just cephalad of the venation is larger, larger than the one farther distad of it (along cephalic margin), the latter cone-shaped (not crescentic as in the genotype) with the smallest end at the cephalic margin, this end narrow; on the caudal half of the wing there are not three spots as in the genotype but only two (the proximal one largest, both paired with the two cephalic spots) and these are larger than the corresponding two in the other species (which bears an additional spot farther proximad near

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the hairless line). Marginal vein black, the stigmal pale, the former over thrice longer than wide, about twice the length of the stigmal. Funicle joints much wider than long, one and two subannular. Pedicel subcompressed, short. Frons moderate, narrower than in the other species, prominent, the head rounded, the face much inflexed. Mandibles tridentate but the third tooth is but shallowly separated from the second and is truncate. In the fore wing there is also a small round dot just at apex (but not at the margin).

Described from four females reared from Chrysomphalus aonidum and Alcurocanthus woglami, Kingston, Jamaica, L. F. Ashby, January 20, 1914.

Types.—Catalogue No. 19405, U. S. N. M., four females on tags plus a slide bearing a fore wing and head (also antennæ of *Homalopoda cristata* Howard). Three of the females are paratypes.

In this genus and *Homalopoda* there are two slender black clumps of hairs from the apex of the scutellum and another from the upper occiput near each eye.

PARALEUROCERUS new genus.

Female.—In my table of the earth's encyrtine genera runs to *Leuroceroides* Girault but differs in the following particulars. The antennæ are inserted nearer the mouth border, the club is wider than the funicle, the scape is rather greatly dilated ventrad and the postmarginal and stigmal veins are subequal, each somewhat longer than the marginal which is slightly longer than wide. Agrees otherwise with the original description of that genus.

1. Paraleurocerus bicoloripes new species. Genotype.

Female.-Length, 0.80 mm.

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Dark metallic green, the axillæ, scutellum and the body distad black green, the wings hyaline, the venation pale yellow; knees, tips of tibiæ and the tarsi white, the middle tibiæ white along distal two thirds (thus with a broad, concolorous band some distance below the knee); caudal knees nearly all concolorous; all of middle tarsus white. Bulla and apex of scape rather broadly, white, also one side of funicles one to three, most of funicle six and both sides of four and five. Pedicel longer than any of the funicle joints, all the latter subquadrate but six over twice the size of one, the joints enlarging in succession; club truncate at apex, slightly over half the length of the funicle; pedicel slightly longer than wide at apex. Third tooth of mandibles broader and slightly longer than the others. Caudal wings with about fifteen lines of discal cilia where broadest; hairless line of fore wing with about three complete lines of cilia proximad of it, followed by numerous half complete lines. Body finely scaly, the dorsal thorax sparsely pubescent. Axillæ slightly separated. Lateral ocellus slightly separated from the eyes. Two other teeth of mandibles acute. Distal joint of cephalic and caudal tarsi black.

The males are similar but the flagellum is distinctly clothed with longer hairs, the pedicel is subglobular, no longer than funicle six which is slightly shorter than one, the latter somewhat longer than wide, the scape and pedicel concolorous, rest of antennæ dusky yellowish.

Described from two males, four females reared from a cherry leaf miner (*Lithocelletis* species), Wood's Holl, Massachusetts, July 9, 1914 (J. T. Patterson).

Types.—Catalogue No. 19406, U. S. N. M., a pair on a tag and another on a slide with heads.



NEW ASIAN GALL MIDGES.

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The species described below are particularly interesting because of the addition to our knowledge of zoöphagous forms, some of which may prove to be of considerable economic importance. A study of the collections forwarded by Prof. Rutherford showed that he had reared *Diadiplosis coccidivora* Felt from *Pscudococcus* species on *Tephrosia hookeriana*, and also from the same genus on cocoanut and cocoa, indicating that this species is rather common and abundant. The records show the occurrence of the peculiar American genera *Didactylomyia* and *Dentifibulua* in Asia and the presence in that section of the world of *Arthrocnodax*, a genus previously known only from Europe and America. The zoöphagous species have considerable in common, structurally speaking, and the wide distribution of some of these highly specialized forms is certainly worthy of note.

Didactylomyia ceylanica new species.

The striking midges described below were taken in a bungalow at light by A. Rutherford, Peradeniya, Ceylon, and forwarded under date of June 8, 1914. The flagellate antennal segments are relatively much less prolonged than in the type species, though in other re-